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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,705	01/22/2002	Kazuhiko Higashi	Q68150	6333

23373 7590 03/20/2006

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EXAMINER

JARRETT, RYAN A

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/031,705

Applicant(s)

HIGASHI, KAZUHIKO

Examiner

Ryan A. Jarrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 13-24 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.
2. This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 13, 14, and 15, drawn to a numerical control system, comprising the following special technical feature(s):

Each of the numerical control apparatus and the peripheral devices comprises a receiving controller for checking the emergency stop information section in the received communication frame irrespective of the station address specified in the transmitted communication frame in case a receiving error occurs.

Group II, claim(s) 13, 14, and 16, drawn to a numerical control system, comprising the following special technical feature(s):

The communication frame comprises a gating off system information section for specifying a system to be gated off in the communication frame. The numerical control apparatus specifies the system to be gated off in the gating off system information

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section and transmits the communication frame to the peripheral devices. The peripheral devices perform gates off the peripheral devices per each system specified by the communication frame.

Group III, claim(s) 13 and 18-20, drawn to a numerical control system, comprising the following special technical feature(s):

The peripheral devices, when a synchronization frame transmitted from the numerical control apparatus is received in initial communications, outputs a synchronization signal and calculates the time required for the peripheral devices as the most downstream node to receive the synchronization frame. The peripheral devices calculate a transmission timing that considers a transmission delay between peripheral devices based on the connection information transmitted from the numerical control apparatus in initial communications. The numerical control apparatus calculates the transmission timing in communications between the peripheral devices from the data volume of communication frames transmitted to the peripheral devices and the data volume of communication frames transmitted by the peripheral devices in communications between peripheral devices. The peripheral devices retain the transmission timing in communications between peripheral devices in order to perform communications between peripheral devices by using the transmission timing in the communications between peripheral devices.

Group IV, claim(s) 13, 21, and 22, drawn to a numerical control system, comprising the following special technical feature(s):

Information such as an alarm, gating off, and emergency stop included in a communication frame received by a port 1 receiving controller or port 2 receiving controller is latched and the information is appended to a communication frame to be transmitted from a port 2 transmission controller or port 1 transmission controller.

Group V, claim(s) 13 and 23, drawn to a numerical control system, comprising the following special technical feature(s):

When the write pointer is out of synchronization with the read pointer in the communication control buffer or when the communication control buffer is reset, a first bit pattern output after the read pointer has moved is not a specific bit pattern serving as a flag.

Group VI, claim(s) 13 and 24, drawn to a numerical control system, comprising the following special technical feature(s):

Dummy data is created for balancing the bit pattern of a start flag and the bit count in data transmission using optical transmission modules so as to transmit the dummy data in combination with the start flag.

Group VII, claim(s) 17, drawn to a method for setting a communication timing in a numerical control system, comprising the following special technical feature(s):

Calculating the transmission timing of the peripheral devices from the number of model codes and the order of model codes appended to a port information command when a response to the port connection confirmation command and the port information command are received from the peripheral devices. Transmitting the response to the port connection confirmation command to upstream nodes after the port connection confirmation command is received; transmitting the port connection confirmation command to downstream nodes after the port connection confirmation command is received, appending a model code allocated to the port information command in advance to transmit the resulting command to upstream nodes.

3. The inventions listed as Groups I-VII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Groups I-VI share the same technical feature of claim 13, and Groups I-II further share the same technical feature of claim 14. However, the technical features of claims 13 and 14 are not "special" as evidenced by Yamashita et al. US 5,822,615 (e.g., Fig. 1, col. 5 line 11, col. 6 lines 3-28, col. 7 lines 41-67) and EP 0208998 (e.g., pg. 8 line 34 – pg. 12 line 2, pg. 5 line 2). These references were applied as X references against claims 13 and 14 in communications from a foreign patent office.

The special technical feature(s) for each group are listed above. The special technical feature(s) listed above are unique to each group and are not shared by any other group.

The determination regarding unity of invention is made without regard to whether a group of inventions is claimed in separate claims or as alternatives within a single claim. The basic criteria for unity of invention are the same, regardless of the manner in which applicant chooses to draft a claim or claims.

4. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

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Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan A. Jarrett whose telephone number is (571) 272-3742. The examiner can normally be reached on 10:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ryan A. Jarrett
Examiner
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3/7/06
RAJ

